UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/783,352	02/14/01	LEWIS D	200-1731

EXAMINER	
TRAN, D	
ART UNIT	**PAPER NUMBER**
3748	3

DATE MAILED: 10/22/01

GLENN E. FORBIS
RADER, FISHMAN & GRAUER
SUITE 140
39533 WOODWARD AVENUE
BLOOMFIELD HILLS MI 48304

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/783,352	Lewis
Examiner	**Art Unit**
Diem Tran	3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-10 is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideratio

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-10 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a)☐ All b)☐ Some* c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15)☒ Notice of References Cited (PTO-892)

16)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2

18)☐ Interview Summary (PTO-413) Paper No(s). _____

19)☐ Notice of Informal Patent Application (PTO-152)

20)☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Abe et al.(US Patent 5,887,422).

Regarding claim 1, Abe discloses a method of controlling an air-fuel ratio in an internal combustion engine, comprising the steps:

purging a hydrocarbon trap; and adjusting the air-fuel ratio in the engine in response to said hydrocarbon trap purging (see col. 3, lines 39-61; col. 6, lines 58-63).

Regarding claim 8, Abe discloses a system for controlling an air fuel ratio in an internal combustion engine, comprising:

a hydrocarbon trap positioned in an exhaust path downstream of the engine (see Figure 1);

an air supply device capable of selectively providing a supply of air to said exhaust path upstream of said hydrocarbon trap (see col. 7, lines 15-26);

a controller for adjusting the air-fuel ratio in the engine during a time period when said air pump is providing air to said exhaust path (see col. 9, lines 17-21, lines 45-49).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2-7, 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe et al.(US Patent 5,887,422) in view of Modica et al. (US Patent 5,916,129).

Regarding claims 2, 9, Abe discloses all the claimed limitations as discussed in claims 1, 8 above, however, fails to disclose said adjusting step comprises biasing said engine air-fuel ratio rich. Modica teaches that it is conventional in the art, to utilize the adjusting step which biases said engine air-fuel ratio rich (see col. 15, lines 29+).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the adjusting step which comprises biasing said engine air-fuel ratio rich as taught by Modica in the Abe method, since the use thereof would have improved the efficiency of the emission control system.

Regarding claim 5, Abe discloses a method of controlling an air-fuel ratio in an internal combustion engine, comprising the step of purging a hydrocarbon trap for a period of time (see col. 3, lines 39-49); however, fails to disclose the step of adjusting the air-fuel ratio in the engine more rich during said period of time. Modica teaches that it is conventional in the art, to utilize

the step of adjusting the air-fuel ratio of the engine more rich during said period of time (see col. 10, lines 28-45; col. 15, lines 29-39).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have adjusted the air-fuel ratio in the engine more rich during the purging time as taught by Modica in the Abe method, since the use thereof would have improved the efficiency of the emission control system.

Regarding claims 3, 6, Abe further discloses said purging step comprises providing air from an air supply device to an exhaust stream upstream of said hydrocarbon trap (see col. 7, lines 15-26).

Regarding claims 4, 7, 10, Abe further discloses said air supply device is an air pump (see col. 7, lines 25-26).

Conclusion

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (703) 308-6073. The examiner can normally be reached on Monday -Friday from 8:00 a.m.-5:30p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 308-7763.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

Diem Tran
Patent Examiner
Art unit 3748

DT
October 16, 2000

THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700